PROGRAM facts

U.S. DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY
NATIONAL ENERGY TECHNOLOGY LABORATORY

Strategic Center for Natural Gas and Oil

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OIL & NATURAL GAS ENVIRONMENTAL PROGRAM REGULATORY STREAMLINING

Description

Working with industry, DOE's Office of Fossil Energy is helping to ensure that environmental protection approaches make technical, environmental, and economic sense. DOE's Oil & Natural Gas Environmental Program pursues improvements to the regulatory process, supports development of new technologies, and exercises key responsibilities for energy policies that encourage efficient recovery and ensure adequate, secure energy supplies. To support more informed regulatory decision-making, DOE facilitates dialogue among Federal officials, State regulators, industry personnel, and other stakeholders. Through its program activities, DOE can provide assessments of costs or risks, lending an independent voice to the debate. DOE also characterizes problems and possible alternative solutions, providing a catalyst and contributing to the process of achieving common-sense approaches.

Recent Successes

The Texas Electronic Compliance and Approval Process (ECAP) pilot project with the Texas Railroad Commission (TRC) assisted the State of Texas with developing an electronic oil and gas permitting system. The project provided two-way electronic communications for handling compliance aspects of oil and gas regulation. In September 2001, the pilot was implemented, providing the ability to file all types of drilling permits. TRC estimates the savings per drilling permit at $200-400. The ECAP system was estimated to save the industry $3-6 million in 2001. By 2005 TRC estimated the annual savings for Texas would reach $70 million. Louisiana, New Mexico, and California were the first states to develop electronic permitting based on the ECAP and Risk-Based Data Management System (RBDMS) similar to that used in Texas.

The RBDMS project, in cooperation with the Ground Water Protection Council (GWPC), developed a personal computer-based system for improved regulatory and resource management decisions. GWPC's goal was to develop better ways to protect and conserve groundwater resources. RBDMS, currently used in 18 states, provides permitting data, wellbore schematics, GIS capability, Internet access, and electronic permitting and reporting that can be used for a variety of water, air, soil, remediation, and environmental permitting activities. The system is designed to coordinate with the Bureau of Land Management and the Minerals Management Service and thus eliminates duplicate permitting and reporting through data sharing.

The Environmental Compliance Assistance System (ECAS) was developed to supply the oil and gas industry with website information. ECAS provided web links, phone numbers, and addresses of state and federal regulatory agencies to obtain information and permitting forms. ECAS summarized current news and issues relating to environmental compliance and actions under study or taken by state and federal agencies. The website, which is not currently active, provided guidance on preparing waste management plans, records management, emergency response issues, and remediation methods.

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Current Activities

In 2004 NETL funded three projects by the Interstate Oil and Gas Corporation Commission (IOGCC). A short-term project, "Regulatory Streamlining and Environmental Needs of Oil and Gas Producing States," is compiling a report on regulatory and environmental issues faced by State regulators in oil and gas producing states.

One three-year effort will compile data and streamline regulatory processes. "Compilation and Presentation of Existing Data on Oil & Gas Leasing and Development in a Manner Useful to the NEPA Process" is a feasibility study to increase access to federal lands though development of consistent impact analysis methods. The methods will incorporate GIS tools and use existing data to calibrate current methods for more accurate predictions. In the past there was no guidance document for National Environmental Policy Act (NEPA) compliance and Environmental Impact Statements, leaving industry at a loss to interpret the Environmental Protection Agency (EPA) jargon and understand the regulations or where to find the necessary data to complete applications for permits. The data gathered under this program will effectively enable land management agencies to make faster and more comprehensive use of data to determine where increased access to federal lands is appropriate while maintaining a balance with environmental protection. The focus of the work will be in the Rocky Mountains and Alaska and will leverage existing data, federal agencies, state agencies, and industry representatives to identify sites of interest for field studies. The end product is a user-friendly, guided approach to oil and gas NEPA analysis that will be flexible and able to account for regional, geographical, topographic, or other differences that may affect compliance.

The third project focus is on produced water: "Identification, Verification & Compilation of Produced Water Management Practices for Conventional Oil & Gas Production Operations." The goal of this project is to improve the efficiency and reduce the cost of managing produced water from conventional production in order to extend the productive life of wells—which increases the ultimate recoverable reserves —while providing improved environmental protection. One topic under consideration in Texas is the reclassification of produced water brine, currently mandated to special Class II injection wells by EPA. This holds the potential to substantially reduce the cost of disposal by allowing onsite disposal of concentrated brines. This would eliminate transportation costs and reduce the effects of heavy trucking of produced water on roads and the environment. The overall effect would be to lower the cost of beneficial use of produced water.

Benefits

The oil and gas industry benefits greatly by cost and labor-saving management programs geared at improving the speed and efficiency of the permitting process. Various aspects of current and past NETL Oil and Gas Environmental Program projects have piloted electronic permitting; enabled access to information on regulations, new laws, and responsible agencies; and compiled large, widely separated data collections into comprehensive, user-friendly databases. Providing sound science to assist EPA to update or change environmental regulations could benefit oil and gas producers, the environment, and provide low-cost water for beneficial use. Pilot programs funded by DOE have spread to many states, and electronic data sharing and permitting processes have improved efficiency and accuracy of the permitting processes, and have thus saving industry, state, and federal agencies millions of dollars in time and labor.

The benefits for the U.S. public from the Oil & Natural Gas Environmental Program are a more competitive, economically viable U.S. energy industry that can supply an adequate amount of energy while simultaneously reducing environmental risks associated with oil and gas production and processing. Reduced costs and improved environmental protection technologies will result in more of America's oil being produced, which will lead to a better quality of life for America's citizens.